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Argentine consensus recommendations for lung cancer screening programmes: a RAND/UCLA-modified Delphi study

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ABSTRACT

Background Lung cancer (LC) screening improves LC survival; the best screening method in terms of improving survival is low-dose CT (LDCT), outpacing chest X-ray and sputum cytology.

Methods A consensus of experts in Argentina was carried out to review the literature and generate recommendations for LC screening programmes. A mixed-method study was used with three phases: (1) review of the literature; (2) modified Delphi consensus panel; and (3) development of the recommendations. The Evidence to Decision (EtD) framework was used to generate 13 evaluation criteria. Nineteen experts participated in four voting rounds. Consensus among participants was defined using the RAND/UCLA method.

Results A total of 16 recommendations scored ≥7 points with no disagreement on any criteria. Screening for LC should be performed with LDCT annually in the population at high-risk, aged between 55 and 74 years, regardless of sex, without comorbidities with a risk of death higher than the risk of death from LC, smoking ≥30 pack-years or former smokers who quit smoking within 15 years. Screening will be considered positive when finding a solid nodule ≥6 mm in diameter (or ≥113 mm^3) on baseline LDCT and 4 mm in diameter if a new nodule is identified on annual screening. A smoking cessation programme should be offered, and cardiovascular risk assessment should be performed. Institutions should have a multidisciplinary committee, have protocols for the management of symptomatic patients not included in the programme and distribute educational material.

Conclusion The recommendations provide a basis for minimum requirements from which local institutions can develop their own protocols adapted to their needs and resources.

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ This is the first consensus on lung cancer screening programmes in the region.
⇒ We used a validated methodology (modified RAND/UCLA Delphi).
⇒ A multidisciplinary group of experts with extensive experience participated in the process.
⇒ Although based on high-quality evidence, these studies were conducted outside the region.
⇒ Pandemic-related restrictions prevented face-to-face meetings.

INTRODUCTION

Cancer is one of the leading causes of death worldwide. Measures related to primary and secondary prevention are highly effective in reducing the impact on many of them; however, its prevalence remains high, and strategies to achieve early diagnosis of this disease are constantly being sought.[1] Worldwide, lung cancer (LC) is one of the most frequent neoplasms (11.6% of all cases) and the most common cause of cancer-related death (18.4% of all cancer-related deaths).[2] The Global Cancer Observatory estimates that in 20 years, there will be a 70% increase in LC incidence and mortality.[2] Age-adjusted mortality in men is 26.3 per 100 000 inhabitants, the leading cause of death from tumours in men, while in women, it is 13.3 per 100 000 inhabitants, the second leading cause of death from malignant tumours in women.[2] In Argentina, the age-adjusted LC incidence is 18.9 per 100 000 persons, and the age-adjusted mortality is 17.1 per 100 000 persons.[3]

When the disease is detected late, the chances of survival are low.[4] In fact, LC screening (LCS) can save lives, and screening with low-dose CT (LDCT) has progressed to be the best method for LCS. In 2011, the National Lung Screening Trial (NLST), which enrolled 53 454 persons and

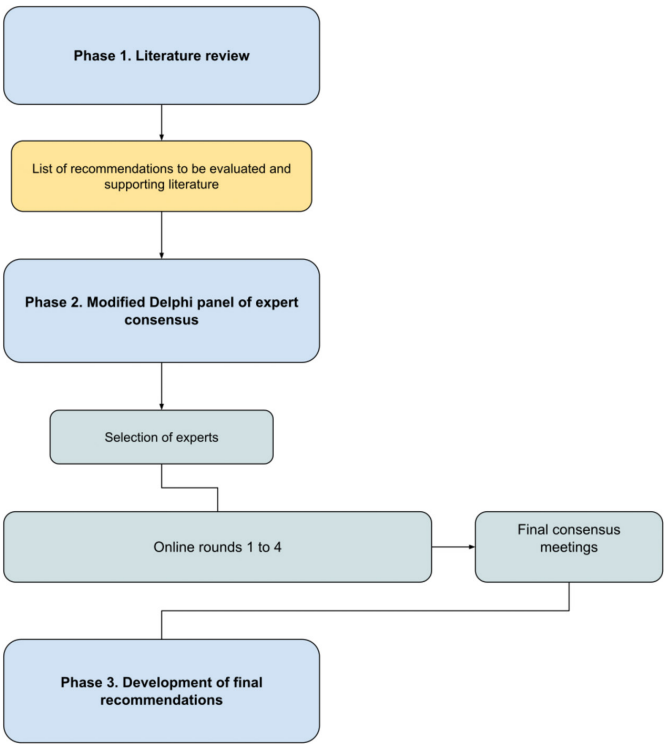

Figure 1 Flowchart of the study phases.

compared screening with either LDCT or chest radiography CT, showed a 6.7% reduction in all-cause mortality and a 20% reduction in LC mortality in screening with LDCT compared with that of chest radiography.[5] More recently, the Dutch–Belgian LC screening trial (Nederlands–Leuvens Longkanker Screenings Onderzoek (NELSON)) showed that LDCT screening resulted in lower LC mortality than no screening among high-risk persons, 2.50 deaths per 1000 person-years and 3.30 deaths per 1000 person-years, respectively.[6] However, the implementation rates of LDCT screening programmes worldwide are low (4.5% of the eligible population in the USA),[7 8] and only isolated efforts have been reported in Latin America.[8–10] To date, there are no local guidelines for recommendations. A consensus of experts was held in Argentina to review the updated literature and obtain recommendations for the implementation of LCS programmes at the local level.

METHODS

This study used a mixed-method design and was conducted between April 2021 and January 2022. It consisted of three phases: a literature review to define the list of recommendations to be evaluated; a modified Delphi panel of expert consensus to select recommendations for LCS; and the development of the package of recommendations based on the consensus results (figure 1).

Phase 1: literature review

The research team (IB, ES, VS, MS, JR, EGE) conducted a comprehensive literature review to develop a preliminary set of recommendations to be submitted for expert evaluation. The databases used were PubMed, EMBASE, CINAHL/EBSCO, LILACS and The Cochrane Library and Google Scholar. Articles addressing the concept, development and scientific evidence of recommendations related to LCS were included. To guide the selection of recommendations, criteria under the validated 'GRADE from evidence to decision' framework adopted by the WHO (Evidence to Decision (EtD)/Developing and Evaluating Communication Strategies to Support Informed Decisions and Practice Based on Evidence (DECIDE) project)[11 12] were used. The online supplemental material shows the search strategies used.

Systematic reviews, meta-analyses, randomised controlled trials, clinical practice guidelines and previous consensus on LCS published in the last 10 years were included in the review to develop the set of recommendations. Uncontrolled clinical trials, studies that did not specify LC diagnostic methods, and those that did not report mortality were excluded. A structured form was designed in Microsoft Excel for data extraction. Two authors independently screened the titles and abstracts obtained from the initial search to select the articles for full review. Selected full texts were reviewed by two authors (VS and ES), and disagreements were resolved by a third party (IB). The research team developed a list of statements with potential recommendations for LCS programmes (IB, ES, VS, MS, JR, EGE). Recommendations to be evaluated were identified deductively and inductively within the following topics: screening method, identification of the population at risk, frequency, duration, implementation of screening programmes, other characteristics of screening programmes and healthcare institutions implementing these programmes. Potential recommendations were included if they had supporting literature and were excluded if they were not relevant for patients at risk of LC or for the local practice setting.

Phase 2: modified Delphi panel of expert consensus

Selection of the expert panel

A group of 21 experts from Argentina was selected and invited to participate in the consensus process. Experts were included if they met the following criteria: (1) healthcare professionals with clinical experience in defined areas related to LC: pulmonology, oncology, public health, general thoracic surgery, diagnostic imaging, primary care; experience in LCS programme activities; (2) active membership in an academic or scientific society (clinical oncology, respiratory medicine, radiology, thoracic surgery, bronchoscopy); and (3) no conflicts of interest.

Prior to the start of the consensus, an information letter and an informed consent form were sent to participants. All experts had the opportunity to review, ask questions and sign the consent form. Of the total number of invited people, 20/21 professionals accepted the invitation, and 19/21 finally participated in the voting rounds. The participants received no financial incentives for

their participation, declared that they had no conflicts of interest and signed an informed consent form.

Grading of the interventions

To guide the evaluation of recommendations during the consensus process, we used the criteria proposed by Grading of Recommendations, Assessment, Development and Evaluations from the EtD framework[11 12] validated and adopted by the WHO in the DECIDE project. This framework facilitates processes in which experts use evidence in a structured and transparent way to inform decisions regarding health recommendations. Potential recommendations were presented to the experts as short statements accompanied by supporting references identified in the review.

Panellists were asked to rate each recommendation according to 13 criteria using 13 nine-point Likert scales ranging from 1 (no justification for the recommendation) to 9 (full justification for the recommendation).[13] The 13 criteria used were (1) priority of the specific recommendation, (2) undesirable effects, (3) desired effects, (4) balance between undesirable and desired effects, (5) quality of evidence on effects, (6) degree to which the recommendation conforms to patients' values and preferences, (7) resources needed to implement the recommendation, (8) quality of the evidence on resources needed, (9) cost-effectiveness of the recommendation, (10) degree to which the recommendation promotes equity in access to health, (11) degree of acceptability of the recommendation by professionals, (12) feasibility of implementing the recommendation and (13) degree to which implementation of the recommendation can be measured (table 1). The median obtained for each criterion for each recommendation was weighted by a factor obtained in the rating of the 13 criteria according to the importance given by the experts to each criterion used. The criteria themselves were rated in the first round; participants had to assign a score to each criterion (from 0 to 9) considering their relevance in the local context. Then, a median score was calculated for each criterion with a resulting factor of 1, 0.89 or 0.78 for medians of 9, 8, 7, respectively. None of the criteria obtained a score lower than 7.

When experts rated the recommendations using the criteria, they could agree or disagree on scores, that is, panellists' scores could be grouped around one number or be dispersed across the scale. Agreement was defined according to the RAND/UCLA method.[9] In this method, an agreement exists if the interpercentile rank is less than the interpercentile rank adjusted for skewness.[13]

Categorisation of recommendations

Each recommendation was rated with the total median score (a summary score of the 13 criteria) and the presence or absence of agreement among the experts on the scores in each of the 13 criteria. First, considering these two parameters, recommendations were classified into one of the following three categories: (a) *appropriate recommendation*: when the median of the expert panel was between 7 and 9, with no disagreement among the participants; (b) *uncertain*: with a median between 4 and 6 or any median with disagreement among the experts; (c) *inappropriate*: median between 1 and 3, with no disagreement. Additionally, recommendations were categorised according to their strength, that is, the extent to which experts could be confident that the desirable consequences outweighed the undesirable consequences. Therefore, a recommendation already deemed *appropriate* was categorised as a *strong* recommendation if the panel was confident that the desirable consequences outweighed the undesirable consequences of the recommendation; *uncertain* recommendations were categorised either as a *conditional* recommendation when the panel was less confident and provided guidance regarding the specific conditions that favoured implementing or

Table 1 Criteria used to evaluate recommendations

Criteria	Description
Priority	The importance of what the specific intervention addresses, urgency of the problem.
Desired effects	The extent of the desired effects of the intervention.
Undesired effects	The extent of the undesired effects of the intervention.
Desirable effects outweigh undesirable effects	Whether comparing the desired effects with the undesirable effects favours the intervention.
Certainty of evidence on effects	The strength of the evidence and the confidence that the available evidence is adequate.
Patient values and preferences	The extent to which practitioners believe the intervention or recommendation would meet patients' preferences for how they might be affected.
Resources required	Resources (money, time, human resources, etc) needed to implement the intervention.
Certainty of evidence on resources required	Quality of the available evidence about the resources needed for the intervention, the strength of the evidence and the confidence that it is adequate.
Cost-effectiveness	The economic impact of an intervention on the health system, government or society.
Equity	Whether an intervention reduces inequalities in health if it reduces differences in effectiveness for disadvantaged populations.
Acceptability	Level of acceptability by professionals due to, eg, ethical principles, distribution of effects and costs.
Feasibility	Whether during day-to-day clinical practice the intervention can be implemented with available resources, infrastructure and training or with a minimal increase in resources.
Measurability	Whether there is an indicator that measures the use of the intervention and whether it can be easily used in practice, without additional resources or with minimal additional resources.

rejecting the intervention or as a *weak* recommendation when the uncertainty in the evidence prevented the panel from concluding for or against the option.[11 12]

Voting rounds

Four rounds of online voting were conducted. In each round, experts received an email with a link to an online questionnaire (zoho.com, Pleasanton, California, USA) to evaluate each recommendation according to the 13 criteria. Participants had 10 days to complete each round; a reminder email was sent to those who did not respond. Each page of the online questionnaire presented a recommendation accompanied by a brief explanation and literature references. Below the statement of the recommendation, there were 13 criteria with 13 Likert scales. Each recommendation had to be rated according to the 13 criteria. From the second round on, participants had access to the anonymised results and their own scores from previous rounds. This helped participants reconsider their evaluation, change it or sustain it through the different rounds. From the second round onward, those recommendations or those criteria for each recommendation that had not reached an agreement in the previous round were included for a new vote. After three online rounds, based on feedback from the experts and to facilitate the consensus process, it was decided to use only five broad criteria (criteria 4, 5, 6, 9 and 12) covering most other criteria. All participants were provided with the contact details of the research team if they had any questions about the materials provided.

Final consensus meetings

All participants were invited to an online meeting (Zoom Video Communications, San Jose, USA). In-person meetings were not possible due to COVID-19 pandemic restrictions. Of the 19 participants who responded to the online rounds, 18 experts participated in the meetings. This final meeting was divided into four 40 min online meetings to facilitate participants' attendance in the context of the pandemic. The main purpose of the meetings was to discuss those recommendations with disagreements and reach a consensus on their evaluation. Recommendations that had not reached an agreement were discussed in relation to their priority, the resources needed to implement them, their cost-effectiveness and their feasibility. Then, recommendations were voted on for inclusion or exclusion. The result of these discussions was a list of recommendations, each with a median score (from 0 to 9) and with the number of the criteria in which the experts had disagreed on their scores (from 0 to 13).

Phase 3: development of the recommendations guide

In the final phase of the process and taking on the results of the consensus process, the research team produced a final document with recommendations for LCS. Recommendations were categorised according to their strength using the definitions described above. The final document was sent to the group of experts for further comments and suggestions. The result of the process is presented in this paper.

Ethical aspects

The development of this study did not involve any type of intervention on individuals. Written informed consent was obtained from all participants included in the study, and all procedures were performed according to the Declaration of Helsinki. The study funder was not involved in any stage of the consensus process.

Patient and public involvement

The need to develop this guide through a consensus process was brought forth from meetings with clinicians and specialists in respiratory medicine and oncology. The set of criteria used to evaluate recommendations took into account patients' values and preferences as perceived by clinicians participating in the process, the impact on health equities and acceptability to stakeholders. Indeed, variability in how patients value outcomes, the likely increase in health inequities, increased costs and burdens on patients are reasons for a weak recommendation. We are disseminating the results of this process through an Open Access publication and presentations at professional and scientific fora and meetings.

RESULTS

Literature review

From a total of 2493 initial articles, 30 were included, most of which were randomised controlled trials of LCS with a prolonged follow-up (Preferred Reporting Items for Systematic Reviews and Meta-Analyses flowchart in online supplemental material). The preliminary list of recommendations to be submitted to the panel for evaluation included 27 recommendations grouped into screening method, target population, definition of risk, screening intervals and screening programme characteristics.

Nineteen experts participated in the four online rounds. The participants' characteristics are presented in table 2.

For interventions with different options, such as a history of smoking, the option with the highest score was chosen, and the other options were discarded. After the four rounds, 18 recommendations obtained a median overall score of ≥7 points, and 16 of these had no disagreements on the score of criteria. These recommendations, with a score of ≥7 points and with no disagreement, were categorised as 'strong recommendation' (table 3).

Recommendations for LCS

Method of screening

LC should be screened with LDCT in any population at high-risk.

Target population

High-risk was defined as follows: persons who were between 55 and 74 years old, of any sex, with a smoking history of ≥30 pack-years, current smokers or former smokers who

Table 2 Panel characteristics

Characteristics	N (%) N=19
Specialty	
Management	1 (5)
Oncology	4 (21)
Pneumonology	7 (37)
Thoracic surgery	3 (16)
Diagnostic imaging	4 (21)
Health sector	
Public	6 (32)
Private	8 (42)
Both	5 (26)
Region	
Buenos Aires and Greater Buenos Aires	14 (74)
Provinces	5 (26)

had quit smoking within 15 years, and without comorbid conditions, implying a risk of death greater than the risk of death from LC. The following selection criteria for the target population of screening programmes were categorised as weak recommendations: history of exposure to asbestos, the use of LC risk prediction models to select the target population and enrolment if centrilobular emphysema was found in LDCT even when over 15 years elapsed since smoking cessation.

Frequency and duration of screening

Panellists agreed that LCS should have an annual interval and should be stopped if one of the following criteria is met: (a) 15 years have passed since the person quit smoking, (b) when the person's physical condition indicates a short life expectancy, (c) when the person is unfit or reluctant to continue with screening and (d) when the person is >80 years old. LCS should also be discontinued if a patient presents a positive result on LDCT.

Definition of positive screening

A positive finding was defined as a solid nodule with a diameter of ≥6 mm (or volume of ≥113 mm^3) in baseline LDCT and a diameter of 4 mm if a new nodule was identified in the annual scan, which will lead to a recommendation for additional testing based on the Lung-RADS (Lung CT Screening Reporting And Data System) categories.[14]

Programme requirements

Participants agreed on four requirements that every LCS programme should meet: (1) programmes should offer a smoking cessation programme for current smokers, (2) they should have multidisciplinary committees, (3) they should develop and disseminate educational material on the risks and benefits of screening and (4) LCS programmes should report their performance. Recommendations categorised as conditional on resource availability were (1) the provision of adequate care and follow-up in situations of inequity in access to healthcare and (2) strategies for the management of incidental findings not related to pulmonary nodules (table 4).

DISCUSSION

In the consensus process, the expert panel defined a set of interventions recommended for the implementation of LCS programmes in Argentina. These are intended to provide a basis for institutions to develop their own protocols adapted to their specific needs and resources. In the consensus process, participants identified priority and the quality of evidence as the most important criteria; however, they acknowledged that, in the local setting, access to the resources necessary for the implementation of recommendations was a significant barrier. Consequently, criteria such as 'necessary resources' and 'reduction of inequalities' did not score well, and recommendations obtained scores of only approximately 7.

High costs and perceived inequities in access to screening programmes have been reported in other contexts. A study in Puerto Rico, where coverage and recommendations for LCS have been available since 2013, showed that only a few professionals included screening in their practice, mainly because of lack of insurance coverage, although they acknowledged its benefits.[15] It is unknown whether current inclusion criteria in screening programmes can optimally select high-risk populations among minorities under-represented in clinical trials.[16–18] Although age and smoking history have been the basis of the eligibility criteria for LCS programmes, the risk of LC is determined by other factors that differ according to geographical areas.[19]

The US Preventive Services Task Force guidelines recommended initiating screening in people smoking ≥20 pack-years,[20] based on models from the Cancer Intervention and Surveillance Modelling Network and analyses of LC risk in current smokers of 20–29 pack-years from the Prostate, Lung, Colorectal, and Ovarian Cancer Screening Trial (PLCO) study cohort[21]; this would prevent more deaths and reduce sex and racial disparities in eligibility. However, clinical trials that included patients with a smoking history of ≥20 pack-years have not demonstrated a significant decrease in mortality.[22–24] Considering the potential advantages in relation to inequity reduction of the lower cut-off point, the expert group favoured the evidence from clinical trials while still expressing concern about inequity and the undesirable effects of reducing the eligible population; therefore, they agreed on the selection of the cut-off point of 30 pack-years.

Regarding cost, regional studies on LCS cost-effectiveness are not available. Although the economic burden of LC is a growing concern in Latin America, the percentage of per capita income spent on LC treatment in the region is 0.3% compared with 1.2% in the USA.[25] The first year of treatment of a patient with LC in Argentina in 2020 was equivalent to 2.25 times the country's gross domestic product per capita.[26] Investment in the

Table 3 Recommendations for lung cancer screening programmes with panellist median scores for strategies deemed 'appropriate' or 'uncertain' after accounting for panel consensus and strength of recommendation

Domain	Recommendation	Score, median (range) Strength
Method	Low-dose CT should be used for lung cancer (LC) screening.	7.1 (3.6–8.5) Strongly recommended
Population	People at high-risk of LC, as defined here and with no conditions implying a risk of death higher than the risk of death from LC should be included.	7 (1.8–8) Strongly recommended
	High-risk status for the programme target population is defined based on two parameters: age and smoking history (current smoking or smoking history), as defined below.	7.1 (5.3–9) Strongly recommended
	Regarding age, high-risk is defined as those persons between 55 and 74 years of age with a history of smoking as detailed below.	7.1 (3.6–8) Strongly recommended
	A smoking of ≥30 packs-year is considered high-risk.	7.1 (4.5–8) Strongly recommended
	Likewise, former smokers with more than 30 packs-year who quit smoking within 15 years are also considered high-risk.	7.1 (4.5–8) Strongly recommended
	All people at high-risk as defined here should be included in LC screening, regardless of their sex.	7.1 (5.3–9) Strongly recommended
Implementation	LCS should have an annual interval.	7 (4–8) Strongly recommended
	Yearly LCS should be stopped if at least one of the following conditions is met: 1. Fifteen years have elapsed from the time the person quit smoking. 2. The person's physical condition suggests a short life expectancy. 3. The person is unable to continue with the programme, or is reluctant to continue with the screening. 4. The person is over 80 years of age.	7 (4.5–8) Strongly recommended
	The cardiovascular risk of the persons included should be evaluated within the screening programme.	7.1 (4.5–8.5) Strongly recommended
	A positive finding is defined as the finding of a solid nodule with a diameter of ≥6 mm (or volume of ≥113 mm^3) on baseline screening or the finding of a nodule with a diameter of ≥4 mm in a patient who has previously presented a negative screening. This finding will lead to a recommendation for additional testing, other than annual screening, according to the Lung-RADS (Lung CT Screening Reporting And Data System) categories.	7 (4.5–8) Strongly recommended
Programme characteristics	LCS programmes should have a multidisciplinary committee of professionals.	7.1 (6.2–9) Strongly recommended
	LCS programmes should have pre-established protocols for clinical decision-making about lung nodule management.	7.1 (5.5–9) Strongly recommended
	LCS programmes should have strategies for the management of symptomatic patients who do not meet the requirements for entry into the screening programme so that they can receive an appropriate diagnosis.	7.1 (5.5–9) Strongly recommended
	Every smoker enrolled in the screening programme should be offered a smoking cessation programme, integrated with the screening programme, to reduce the long-term burden of this disease.	7.1 (5.9–9) Strongly recommended
	Screening programmes should ensure the distribution of educational materials for the population and for healthcare providers with information on the benefits and risks of screening.	7.1 (5.5–9) Strongly recommended

LC, lung cancer; LCS, lung cancer screening; LDCT, low-dose CT.

implementation of LCS programmes with early detection and improved survival could reduce costs for the health system.[27]

In relation to the inclusion of former smokers in LCS programmes, the highest scoring recommendation was the cut-off point of 15 years since smoking cessation. The NLST study used this threshold, while another clinical trial included former smokers with up to 10 years since they ceased smoking.[5 6] The HR of LC mortality decreases as time since cessation increases, with an age-adjusted rate of 0.44 for those who quit smoking within 10–19 years and 0.10 for a non-smoking interval of ≥30 years.[28]

Table 4 Recommendations for lung cancer screening programmes deemed conditional or weak

Recommendation	Score, median (range) Strength
LCS programmes should report their performance, biopsy complication rates and treatments; they should also keep records of the use and results of surveillance and diagnostic imaging studies. *This recommendation is conditional to availability of human and material resources*.	7 (5.5–9) Conditional
LCS programmes should have pre-established strategies to ensure adequate management and follow-up of every person included in the programme in the face of possible situations of disparity and inequity in access to healthcare. *This recommendation is conditional to availability of human and material resources*.	6 (5.3–9) Conditional
Candidate selection should be optimised with LC risk prediction models. *Panellist argued models were not validated in the local population*.	6 (5.5–8) Weak
Individuals with a history of asbestos exposure should be included in the LCS programme, independently of criteria related to high-risk definition. *Panellist argued the degree of exposure to asbestos was not clearly established to justify screening*.	6 (4.5–7) Weak
Persons with centrilobular emphysema should enter and/or continue in the LCS programme, even if more than 15 years have elapsed since they quit smoking. *Panellists argued that the evidence that investigated the association between quantitative assessment of emphysema and LC incidence and mortality showed inconclusive results*.	6 (2.2–7) Weak

LC, lung cancer; LCS, lung cancer screening.

However, approximately 40% of LC cases in former smokers occurred after a 15-year cessation.[29] Additionally, women may be over-represented in this group of former smokers, creating a disparity.[30] Despite a predominance of men among LC cases, there is a growing increase in LC mortality in women, in contrast with the stabilisation or even the decline in LC among men in many countries, partially reflecting changes in smoking habits.[31–33] In fact, a recent review confirms that smoking yields similar risks of LC in women compared with men and warns that the smoking epidemic has not reached maturity in women.[34] LC tends to be diagnosed at earlier ages in women than in men; in addition, women start smoking at a later age and with less intensity.[35] Therefore, current guidelines may exclude former smokers at risk of developing LC and light smokers, subgroups in which women predominate and other factors are considered.

Surprisingly, the use of multivariable models to select participants was not recommended; in the discussions, experts argued that risk models were not validated in Argentina and tended to benefit older people with comorbidities. with shorter life expectancy, who could benefit less from an LCS strategy.[36] Currently underway, the International Lung Screening Trial, a prospective cohort study comparing the accuracy of the PLCOm2012 risk model and the criteria based on age and smoking history to identify the target population, may provide answers to these questions.[36]

In two analyses of NLST data, the presence of emphysema in LDCT was associated with almost twice the risk of LC and a higher LC mortality.[37 38] Based on these data, it has been recommended that people with CT-detected emphysema remain in the screening programme, even if they had not smoked for over 15 years; this would increase the possibility of detection and the time of exposure to undesirable effects. However, other studies examining the association between the quantitative assessment of emphysema and LC incidence and mortality have reported heterogeneous results.[39 40] Similarly, the recommendation to include people who had been exposed to asbestos, a known carcinogen,[41] did not reach the level of *appropriateness* among the group of experts. Panellists argued that the evidence did not clearly define the degree of exposure to asbestos that warranted screening.[42]

This is the first consensus on LCS programmes in the region. The main strengths of this study are the validated methodology applied and the participation of a multidisciplinary group of experts with extensive experience in the three health subsystems. The study has limitations that should be acknowledged: although the recommendations were based on high-quality evidence, these studies were conducted outside the region, and no local studies of the same quality were found. Another limitation was the impossibility of holding face-to-face meetings due to the restrictions applied during the COVID-19 pandemic; virtual meetings constrained the discussion among peers.

Local studies are needed to determine the best criteria for choosing the target population for LCS in our region, considering the variability in the most vulnerable subgroups. It is also warranted to assess the installed capacity of current resources (CT scanners, multidisciplinary teams) for the successful implementation of LCS programmes.

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